

THE IMPACT OF STUDENTS' MIGRATION ON A SCHOOL'S LIFESPAN: A CASE STUDY ON DULCEȘTI SCHOOL IN NEAMȚ COUNTY

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Abstract: Internal and international migration in Romania is a well-known fact with a significant influence on the overall society. Schools are also profoundly affected by migration, and especially by student migration. Annually, every school in Romania submits a school plan detailing the number of classes, the number of teachers, and other vacancies, which has a significant impact on the establishment's finances. When calculating this projection, the leading indicator considered by the school management is the number of births in the previous 3 to 5 years. Nevertheless, at the beginning of the school year, another primary marker is involved in establishing the final number of students: migration. This research shifts the focus to a specific, longitudinal examination of a rural school in the Dulcești commune, located in Neamț County. By analysing data spanning the last 30 years, the study offers a unique "school-study" of how educational communities survive and adapt on the periphery of major urban centres. By correlating birth statistics with student departures, the authors aim to identify long-term patterns in migration-driven enrollment shifts. This research is trying to see the impact of the polarising role of Roman municipality on the students' number from the school of Dulcești commune. Due to its proximity, Roman acts as a powerful polarizing force, drawing students away from rural classrooms and toward urban opportunities. This "pull factor" creates a consistent gap between the number of children born in the commune and the number who actually occupy its desks.

Keywords: students' migration, school lifespan, schooling plan, school network

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INTRODUCTION

Territorial mobility has been a foundational aspect of human society's development, as one of the key social and economic factors that demonstrates its constant presence in the daily life of any community. The revolution of 1989 led to a significant shift in the migratory behaviour of the Romanian population, following the lifting of the territorial mobility bans imposed by the communist regime. At a national level, the freedom of movement has resulted in an acceleration of the territorial mobility of the population in the process of social resettlement determined by the new social and economic conditions, and, in particular, a reversal of urban to rural migration flows (Rotariu, 2010) (most of these flows were return migrations after 4-5 decades in which the majority of migrations were from rural to urban areas). A vast body of literature has analysed internal migration during the communist era.

There is a general consensus among authors that, prior to 1990, internal migration was predominantly from rural to urban areas, as shown by Kupiszewski et al. (1997), Mihăescu et al. (2020), and Muntele et al. (2022). It is evident that, due to the restrictions imposed by the communist regime, international migration was not a viable option for the majority of Romanians. As a result, the impact of international migration on the school-aged population was negligible prior to 1990. In some cases (particularly in rural areas), there were no children born abroad throughout the entire recorded history of certain schools before December 1989. This is also the with Dulcești School.

After the fall of the communist regime, the most significant change occurred at the level of international migration, marked by a substantial "explosion" of departures, while Romania's net migration rate became negative. If the last decade of the twentieth century marked a timid and individual beginning of departures to Western Europe, the first decade of the new millennium coincided with an almost organized migration of entire communities, especially from rural areas. The phenomenon of remigration marked the second decade of the 21st century: against the background of the economic crisis that began in 2008, a large part of the population, and especially of underage, returned to the country, the return migration being more evident in the last 3 - 4 years (Luca et al., 2012).

Schools were, in turn, affected by migration, both directly through the departure of students and indirectly through the decreasing birth rate in communities with a high migration rate, as those who migrate usually belong to the fertile population (ages 20-39). The present study examines the numerical evolution of the school population at Dulcești

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School from 1990 to 2025. The school is located in a rural area in Northeast Romania, in the peri-urban area of Roman, a city considered second-tier in the urban hierarchy of the North-Eastern development area. This school unit was chosen due to its position in relation to the primary urban centre; the locality is 15' isochronous to it.

In contrast, the subordination relations to the urban centre are evident. The school network of Dulcești commune is dependent on the network of Roman municipality, to which it is subordinated in terms of access to various forms of higher education. Dulcești commune has a population of 2548 inhabitants, according to the data provided by Dulcești Commune Hall for June 2021. As shown in Figure 1, this territorial and administrative division for local government comprises six villages: Brițcani (56 inhabitants), Cîrlig (371 inhabitants), Corhana (594 inhabitants), Dulcești (1,124 inhabitants), Poiana (122 inhabitants), and Roșiori (281 inhabitants). The majority of the population adheres to the Orthodox religion (82.02% of the total population), with a well-defined minority of Roman Catholics.

However, the population exhibits more pronounced territorial mobility than international migration. It is about the village of Corhana, where 71.05% of the population identifies as Roman Catholic (according to data provided by the Parish of the Blessed Virgin Mary). The share of this denomination in the total number of inhabitants is insignificant in any of the remaining villages, that is, approximately 0.01% in Dulcești and 0.02% in Roșiori. In the other localities, there aren't any persons belonging to this denomination registered. The existence of such an essential Roman Catholic population can be explained by the village-match relationship that Corhana has with the village of Pildești on the left bank of the Moldova River. This village is part of a chain of Catholic communities in the Moldova Valley.



Figure 1. Neamț County and Dulcești commune on Romania's map

Annually, the school units, based on demographic evolution, propose a schooling plan on which the entire school activity depends. The school budget is influenced by the schooling plan, as the Law of National Education from 2011 introduced the principle of per capita funding. The only criterion analysed and considered in the proposal for the schooling plan is the birth rate. Practically, in this way, the entire demographic evolution of a school is reduced to a single element. However, the everyday reality introduces another element into the equation, the migration of students (either negative or positive, depending on the direction of migration). In the case of small communities, the migratory phenomenon can cause significant disruptions to the student population, and this study aims to investigate the impact of student migration on the number of students. The life of a school community can be analysed by similarly applying all the demographic indicators used to characterize any population. The total balance of a school unit, represented by the number of students who left at the end of the school year, is precisely the result of this "synchronization" between the natural movement and the migratory movement of the school population. At the level of any school unit, the inputs are represented by the birth rate and the number of students transferred to the unit (immigrants).

The outputs refer to the students who finish a cycle of education and leave the unit to attend a higher education institution (Figure 2), as well as the students who leave the school and transfer to a school of the same level (emigrants). The only exact figures that can be quantified and predicted are those related to students who reach school age and graduates. Student migration, as embodied in the language of school units within the student movement, involves working with much more volatile figures, subject to the influence of factors unrelated to the school and the local community.

It is also worth noting that the school network of Dulcești commune has undergone significant changes over the past 30 years. The most considerable disruption of the school network occurred in 2003, when the villages of Ruginoasa and

Bozienii de Sus separated from the commune and formed a separate and independent administrative-territorial entity. In 1990, Dulcești school coordinated the schools from the villages Cîrlig, Corhana, Poiana, Roșiori and Ruginoasa. Due to the decrease in school population, the subordinated schools closed one by one, and this fact is reflected in the reduction of the number of students (*numerus clausus*). As mentioned earlier, this study examines the evolution of the student population at Dulcești Secondary School over 30 years, with a focus on the impact of student migration on the student body.

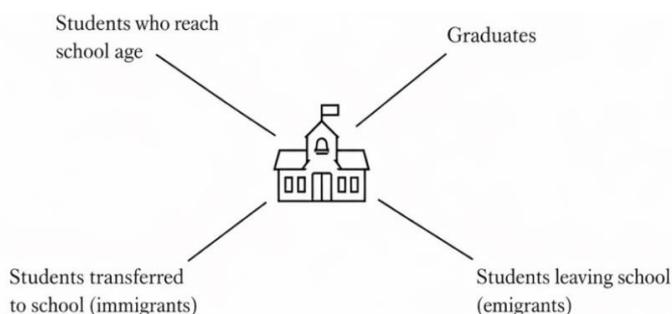


Figure 2. Inputs and outputs in the life of a school during a year

METHODOLOGY

The period under analysis spans from 1990 to 2020. It covers the last 30 years, which have seen significant changes in the Romanian education system, ending with the school year 2019-2020. This year has generated a paradigm shift in population migration, and implicitly, in student migration, against the backdrop of the COVID-19 pandemic. Dulcești Secondary School educates preschool students (3-6 years old), primary school students (6 -10 years old), and secondary school students (11-14 years old). Between 1990 and 2009, the unit also educated vocational school students (9th and 10th grades). As no records of pre-schoolers were found before the 2013-2014 school year, the analysed enrolment figure includes only students from primary, secondary, and vocational schools.

The number of student places is reported at the end of the school year, as it also includes transfers made during the year. Exceptions are the enrollment figures for the first grade/preparatory class, which were reported at the beginning of the school year, in an effort to emphasize the role of input into the system of students reaching school age. Starting with the 2012-2013 school year, the reporting focuses on the number of students enrolled in the preparatory class.

Both raw and relative data were used in the research, depending on the phenomenon under analysis. Several sources of information were utilized to establish a correlation between the data provided by various public entities. The Tempo database of the National Statistics Institute, the database of the Roman Catholic Episcopate of Iași, and the population register of Dulcești Commune Hall were consulted. The data regarding the school population were selected from the school documents of the school archive, respectively from grade registers, enrollment registers, and student records. For the period 2013-2020, electronic documents included in Romania's Integrated Education Information System (SIIR) national platform were analysed. The school from Dulcești provided this information, and they are the source for all the figures in this article.

Additionally, a crucial aspect of the research was the interviews with the parents of students involved in the migration process. Parents were questioned about the destination of their deployment, whether it was internal or international, and the reasons for this migration. PhilCarto was utilised to produce the maps and visually represent the subject, whereas Excel was employed for data analysis and chart generation. In addition to providing context for the information provided by the parents, it was necessary to consult an extensive body of literature in the fields of geography, history, sociology, and economics.

RESULTS AND DISCUSSIONS

The school, like any system, has a life cycle that begins with the setting up of the institution and ends with the administrative closure or physical disappearance, due to the lack of school population. During the "life" of a school, its size, materialised in the number of students, is influenced by the inputs and exits of the system. Each school unit has a school district, the students' "pool" of origin. In the case of rural schools, the polarisation area of the school population overlaps the boundaries of the commune. Exceptions are the educational institutions that educate higher levels of education than secondary school, for example, the ninth and tenth grades for vocational school or grades 9-12/13 for high schools, and which extend their area of influence on neighbouring territorial and administrative units. The present case study analyses a secondary school, which includes preschool and primary school, and which in the first stage of the research period included ninth and tenth grades within the vocational schools (upper secondary school). As mentioned, the inputs are represented by students who reach school age and are admitted to school according to the law, as well as by the transfers of students from other school units. Schools can design the volume of inputs with a fairly high precision by reaching the school enrolment age according to the birth rate. It should be noted, however, that there is a gap of 7 years between the reference year for which the birth rate is considered, and the year in which the actual entry of students into school occurs: students who entered the first grade in the school year 1990-1991 are those born between 01.09.1982 - 31.08.1983.

This type of demographic analysis is specific to school management units, but the results are rarely published. Most schools maintain internal documents that provide information on the temporal evolution of their student population. Such data are collected through the national educational platform that gathers statistical information from all schools. This platform, called the Integrated Information System of Education in Romania (SIIR), provides detailed information

about students, teachers, infrastructure, and educational programs. Scientific studies analysing the dynamics of student enrolment in secondary education are relatively scarce in Romania.

Most demographic and sociological studies that examine the evolution of student numbers in pre-university education adopt a general approach. The demographical decline of Romania’s population has a directly affected the distribution of the population by age groups (Andrei et al., 2022), reflecting a broader trend observed at both European and global level (Muntele, 2022). The discrepancies between the gross birth rates and the number of students enrolled in the first-grade stem from differences in how these two indicators are calculated and reported (Figure 3).

The birth rate reflects the total number of live births recorded during a calendar year, as of December 31 (Rotariu, 2009). In contrast, the number of students enrolled in the first grade includes children born across two calendar years, specifically those born between September 1 and August 31 of the following year.

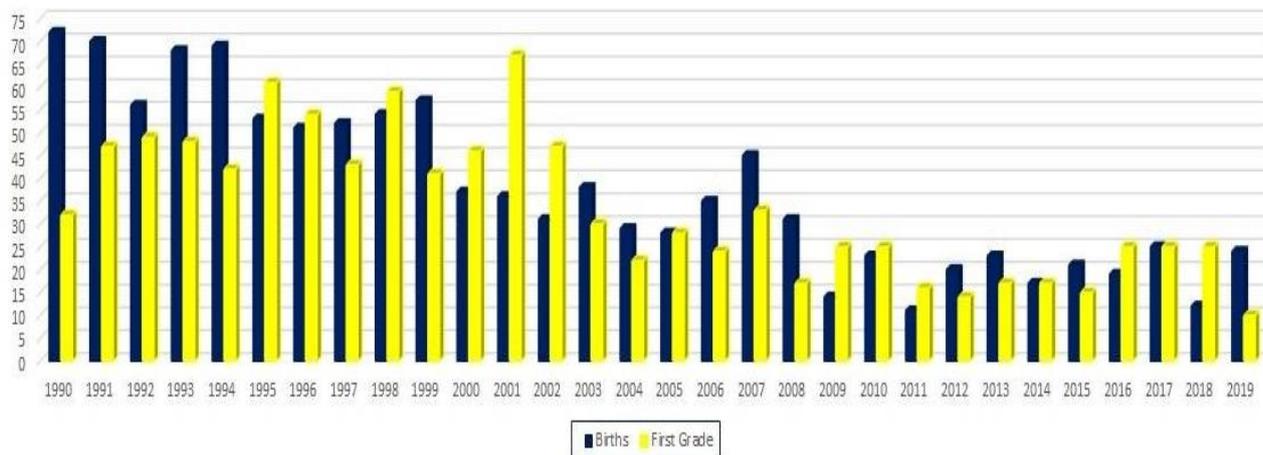


Figure 3. Evolution of birth rate and first grade students (1990 – 2020) (Source: Dulcești School)

There is a similarity in the temporal evolution of the two indicators, as the birth rate directly influences the number of enrolments in the first grade. The downward trend of the two indicators is similar to the evolution at the national level. The highest birth rates were recorded in the years 1990 - 1994, against the background of maintaining a behaviour in favour of high natality, reminiscent of the birth control policies during the communist regime. The liberalisation of abortions and the emancipation of women amid the massive migration from 1995 to 2000 had the effect of lowering the birth rate, with visible effects until 2005. The relatively small fluctuations in the birth rate for that period are explained by the higher rate of departure among men (Rotariu, 2010). The years preceding the economic crisis of 2008, recorded a slight increase in the birth rate, after which began a decrease to the historic low in 2011, when only 11 children were born in a population of 2293 inhabitants, meaning a rate of 4.97 ‰, which was half the birth rate at the national level (9.9 ‰) and below the county level (5.2 ‰). Against the background of the economic recovery, the birth rate started to increase, reaching the value of 9.42‰ in 2019. The economic crisis that Romania was going through in the mid-90s due to the closure of the main production facilities in the industrial sphere and mines, led to the migration of the population internally, from heavily industrialized areas to the areas of origin, and externally to the former Latin language-speaking states in the Western Europe, especially Italy and Spain. The share of transfers in the total enrolment figure of Dulcești School does not weigh a lot, as the impact is quite low during the 30 years observed. The lowest value, of 2.3%, was registered in the school year 1999 - 2000, which can be explained by a relative economic stability at the national level.

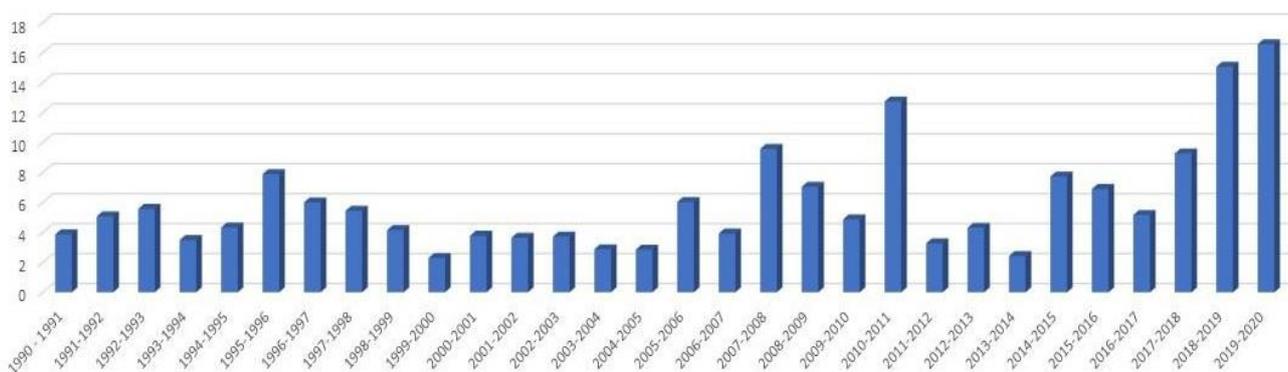


Figure 4. Transfer share 1990 – 2020 (Source: Dulcești School)

Analysing Figure 4, we observe that the general evolution of the share of transfers in the total number of student places is sawtooth induced, as it cannot establish a specific pattern. The last three years analysed show an upward trend, as the highest share, of 16.56%, is registered in the school year 2019-2020. What is interesting about this last school

year is that, after consulting the school records, the students who are the subject of transfers are the same, in the sense that among the 20 actual transfers, 2 students who transferred and then returned to the unit twice in the respective school year, represent 25% of the total transfers for that school year. The increase in the share of transfers from the total number of student places starting with the school year 2017 - 2018 is explained by the introduction of simultaneous classes at the primary level. Given that the parents work in the Roman Municipality, and the school units in the city offer after-school courses, they prefer to transfer the students to similar units, where they can attend independent classes.

The correlation between student inflows and outflows through transfers (Figure 5) indicates a relatively stable pattern of departures from the school unit over time, with a notable increase in the last three school years. Student entries follow a trend similar to the overall number of transfers at the school level. The highest transfer numbers were recorded in the 1995–1996 school year, driven largely by the return of families from heavily industrialised areas affected by the closure of extractive and production facilities. The 1991 property restitution law also played a key role, enabling rural residents to reclaim land that had been confiscated during the communist regime.

These demographic shifts were influenced by job losses in the secondary sector, limited employment opportunities in other fields, insufficient professional retraining options, rising living costs, and the lack of mechanised agricultural equipment—all of which contributed to a reversal in migration flows, from urban back to rural areas (Figure 6).

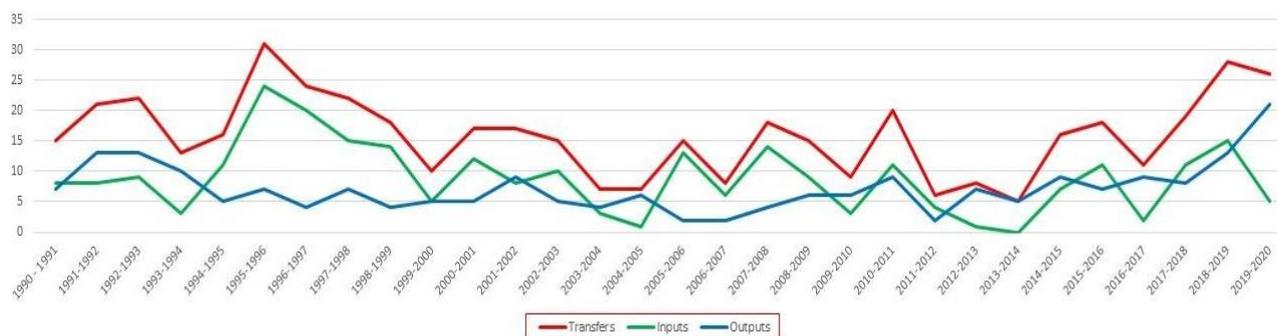


Figure 5. Evolution of transfers between 1990 – 2020 (Source: Dulcești School)

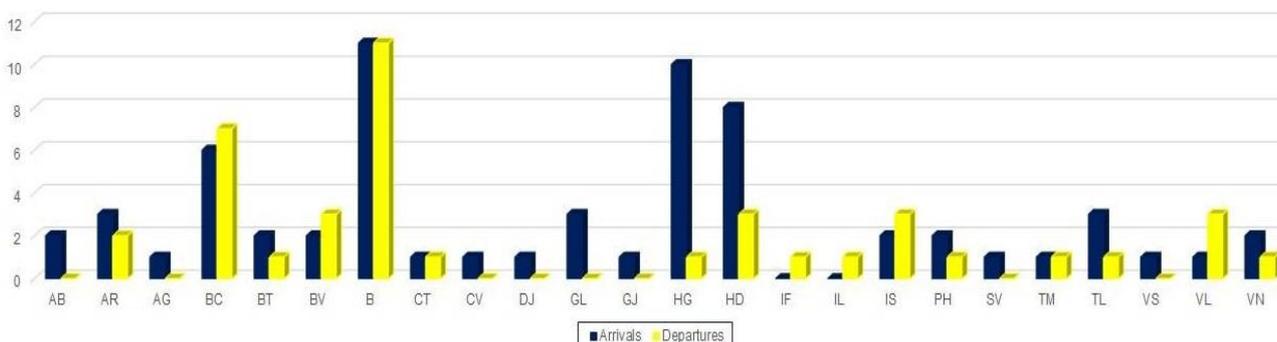


Figure 6. Internal arrivals and departures 1990 – 2020 (Source: Dulcești School)

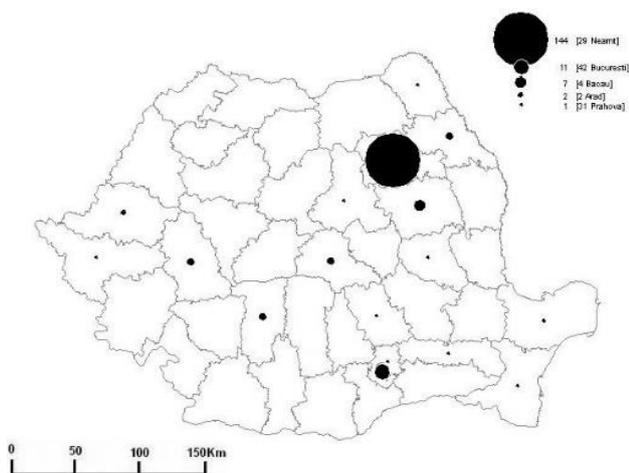


Figure 7. Internal departures (1990-2020) (Source: Dulcești School)

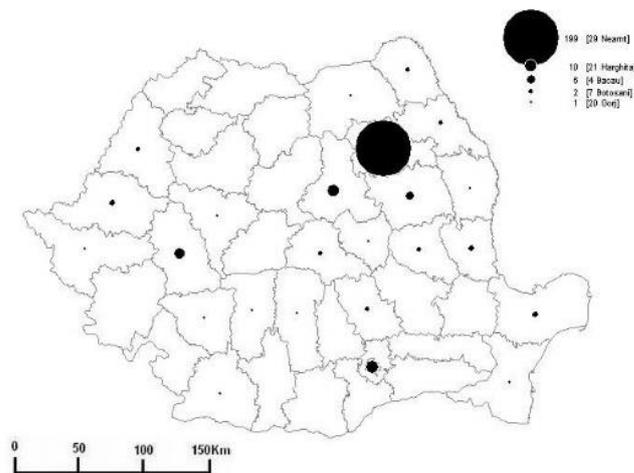


Figure 8. Internal arrivals (1990 - 2020) (Source: Dulcești School)

The correlation between the internat departures from the school unit (Figure 7) and the student arrivals (Figure 8) and over the past 30 years shows that the most significant migration flows are associated with counties perceived as economically developed. The highest number of arrivals corresponds to counties that were highly industrialised during

the communist period—namely Bacău, Harghita, and Hunedoara—where mining employed a large portion of the population. Bucharest stands out as both the primary source of return migration to the commune, largely for economic reasons, and a major attraction point for departures. Student departures tend to be directed toward the same economically polarising areas, particularly Bacău and Bucharest. The preference for Bacău County can be attributed to its geographic proximity and the strong economic development of its county seat during the early 2000s.

An analysis of the spatial distribution of student departures from Dulcești to other administrative-territorial units reveals a general preference for the county of origin and nearby areas. However, migration patterns are highly dispersed across the country, especially toward counties that were heavily industrialised prior to 1990. Within Neamț County, a significant number of students from Dulcești transfer to its two main urban centres—Piatra-Neamț, the county seat, and Roman, a nearby city within its sphere of influence. Still, the most substantial outflows remain concentrated in adjacent localities, largely due to longstanding family connections that link these communities (Figure 9).

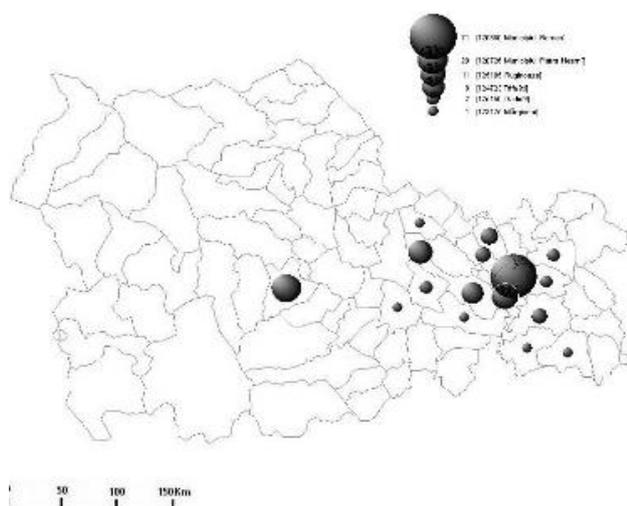


Figure 9. Internal departures (Source: Dulcești School)

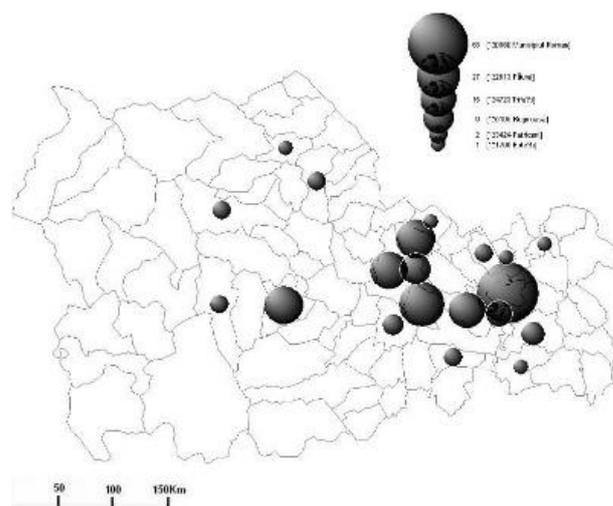


Figure 10. Internal arrivals (Source: Dulcești School)

Student arrivals to Dulcești from other counties show an even more dispersed territorial distribution compared to departures, although the predominant areas of origin remain largely the same. The highest number of arrivals originates within Neamț County itself. Within the county, a significant proportion of incoming students come from neighbouring communes. This is explained by the fact that, between 1990 and 2009, the school unit in Dulcești included lower secondary education classes—specifically, grades 9 and 10—within the vocational school structure.

International departures from Dulcești school follow a general pattern, often observed in the north-east of Romania: there is a tendency to form stable communities in the receiving region in the adoption countries. As illustrated in Figure 10, student emigration from Dulcești to other EU countries reveals a clear preference for Italy. This trend is linked to the fact that all students who emigrated to Italy came from Corhana, a locality with a predominantly Roman Catholic population, reflecting broader patterns of religious and community-based migration (Figure 11).

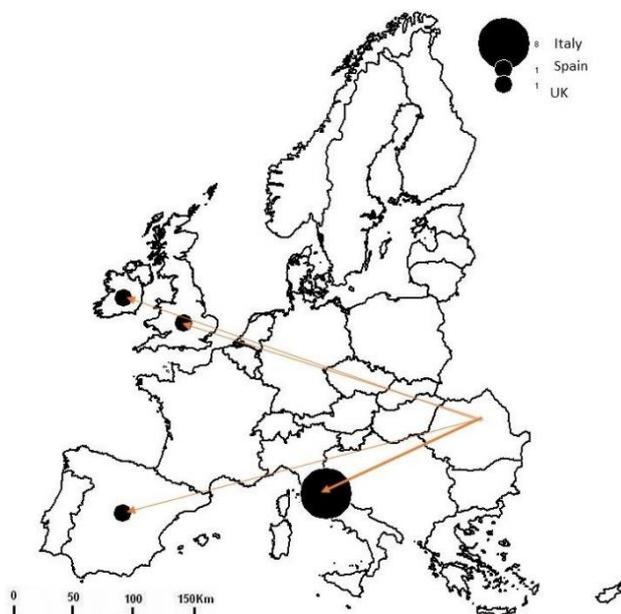


Figure 11. Departures from Dulcești to different European countries (Data source: Dulcești School)

Over the period from 1990 to 2009, both the natural balance (births minus deaths) and the total balance of student numbers were predominantly negative, while the migratory balance was positive. However, beginning with the 2009–2010 school year, this pattern reversed: the migratory balance turned negative, while both the natural and total balances became positive. The improvement in the natural balance during this time may be attributed to the aftermath of the 2008 global economic crisis, which curtailed the migration of the fertile-age population.

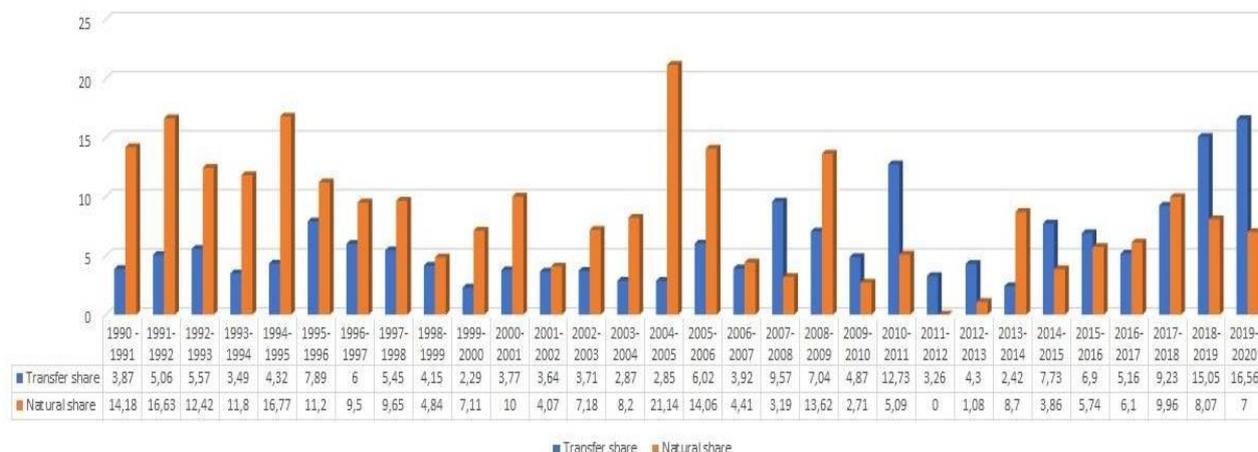


Figure 12. Natural share vs. migratory share (Source: I.N.S.)

In 21 out of the 30 years analysed, the natural balance accounted for a greater share of the total number of student places than the migratory balance (Figure 12). Nevertheless, due to its negative values, the natural balance still contributed to a decline in the school population, mirroring national demographic trends.

Although the migratory balance was positive for much of the period, it was insufficient to offset the natural population loss. Since 2009–2010, the migratory balance has also been negative, further increasing its contribution to the overall decline in student numbers. Even though the total balance has shown positive values over the last 10 years of the analysis, student enrolment at the school has continued to decline.

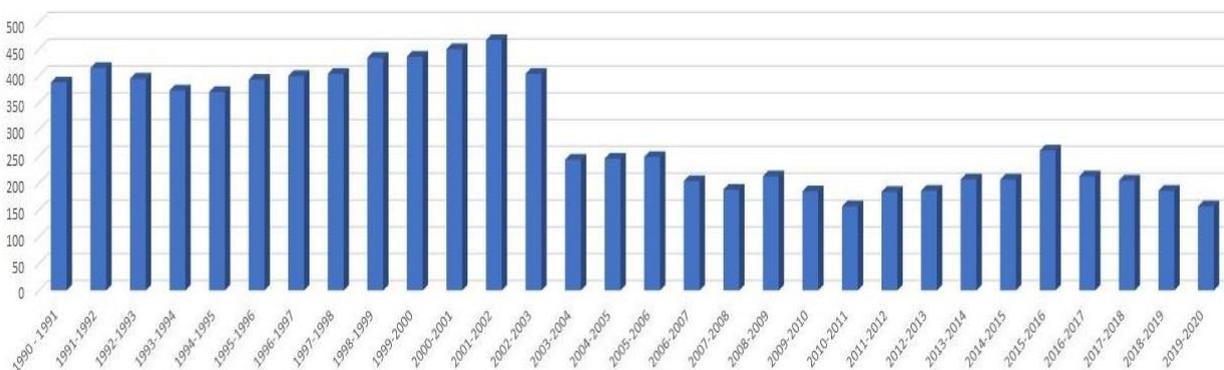


Figure 13. The evolution of the number of students in Dulcești School (Source: Dulcești School)

The overarching trend across the 30-year span is a steady decrease in student enrolment at Dulcești School. The most significant drop occurred in the 2003–2004 school year, when Ruginoasa School became a separate entity with its own legal status, splitting from Dulcești. Although a temporary increase in enrolment was recorded in 2015–2016, the number of students has since declined consistently (Figure 13). This trend is driven not only by low birth rates but also by the introduction of simultaneous classes in the primary cycle.

In the past three school years, social factors—particularly those related to the quality and structure of education—have become more influential than economic factors in driving student migration.

CONCLUSIONS

This study began with the premise that the territorial mobility of students has a significant impact on student enrollment at Dulcești School. Following the conducted analysis, the following key findings were identified:

Birth rate remains the primary determinant influencing the number of students enrolled.

Over the last ten years of the analysed period, the role of migration balance in shaping student numbers has grown, although it is not yet a decisive factor. Student migration has shown a rising trend in recent years.

The correlation between birth rate, first-grade/preparatory class enrollment, and student mobility factors indicates a shift in focus from economic to social (educational) causes. Increasingly, parents prioritize the quality of education, and the presence of simultaneous teaching classes is viewed negatively.

The most significant student exchange occurs within Neamț County, particularly with major urban centres and adjacent administrative areas. Furthermore, it is important to underline that the rural environment remains disadvantaged in terms of opportunities for social advancement. Consequently, parents aspire for their children to attend either reputable schools or vocational institutions that can secure future employment.

The city remains a strong attractor, although it does not accommodate everyone. The peri-urban area exhibits unique characteristics, including higher mobility among the school population—Dulcești being a representative example.

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